



1600

RAW SEQUENCE LISTING

DATE: 04/07/2003

PATENT APPLICATION: US/09/397,342C

TIME: 19:19:23

Input Set : N:\AMC\I397342c.raw

Output Set: N:\CRF4\04072003\I397342C.raw

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1 <110> APPLICANT: Adams, Sean
2     Pan, James
3     Zhong, Alan
4 <120> TITLE OF INVENTION: UCP4
5 <130> FILE REFERENCE: P1626R1
C--> 6 <140> CURRENT APPLICATION NUMBER: US/09/397,342C
7 <141> CURRENT FILING DATE: 1999-09-15
8 <150> PRIOR APPLICATION NUMBER: US 60/101,279
9 <151> PRIOR FILING DATE: 1998-09-22
10 <150> PRIOR APPLICATION NUMBER: US 60/114,223
11 <151> PRIOR FILING DATE: 1998-12-30
12 <150> PRIOR APPLICATION NUMBER: US 60/129,674
13 <151> PRIOR FILING DATE: 1999-04-16
14 <160> NUMBER OF SEQ ID NOS: 18
16 <210> SEQ ID NO: 1
17 <211> LENGTH: 323
18 <212> TYPE: PRT
19 <213> ORGANISM: Homo sapiens
20 <400> SEQUENCE: 1
21     Met Ser Val Pro Glu Glu Glu Glu Arg Leu Leu Pro Leu Thr Gln
22         1                    5                    10                    15
23     Arg Trp Pro Arg Ala Ser Lys Phe Leu Leu Ser Gly Cys Ala Ala
24         20                    25                    30
25     Thr Val Ala Glu Leu Ala Thr Phe Pro Leu Asp Leu Thr Lys Thr
26         35                    40                    45
27     Arg Leu Gln Met Gln Gly Glu Ala Ala Leu Ala Arg Leu Gly Asp
28         50                    55                    60
29     Gly Ala Arg Glu Ser Ala Pro Tyr Arg Gly Met Val Arg Thr Ala
30         65                    70                    75
31     Leu Gly Ile Ile Glu Glu Glu Gly Phe Leu Lys Leu Trp Gln Gly
32         80                    85                    90
33     Val Thr Pro Ala Ile Tyr Arg His Val Val Tyr Ser Gly Gly Arg
34         95                    100                   105
35     Met Val Thr Tyr Glu His Leu Arg Glu Val Val Phe Gly Lys Ser
36        110                   115                   120
37     Glu Asp Glu His Tyr Pro Leu Trp Lys Ser Val Ile Gly Gly Met
38        125                   130                   135
39     Met Ala Gly Val Ile Gly Gln Phe Leu Ala Asn Pro Thr Asp Leu
40        140                   145                   150
41     Val Lys Val Gln Met Gln Met Glu Gly Lys Arg Lys Leu Glu Gly
42        155                   160                   165
43     Lys Pro Leu Arg Phe Arg Gly Val His His Ala Phe Ala Lys Ile
44        170                   175                   180

```

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Input Set : N:\AMC\I397342c.raw

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```

45      Leu Ala Glu Gly Gly Ile Arg Gly Leu Trp Ala Gly Trp Val Pro
46                      185                      190                      195
47      Asn Ile Gln Arg Ala Ala Leu Val Asn Met Gly Asp Leu Thr Thr
48                      200                      205                      210
49      Tyr Asp Thr Val Lys His Tyr Leu Val Leu Asn Thr Pro Leu Glu
50                      215                      220                      225
51      Asp Asn Ile Met Thr His Gly Leu Ser Ser Leu Cys Ser Gly Leu
52                      230                      235                      240
53      Val Ala Ser Ile Leu Gly Thr Pro Ala Asp Val Ile Lys Ser Arg
54                      245                      250                      255
55      Ile Met Asn Gln Pro Arg Asp Lys Gln Gly Arg Gly Leu Leu Tyr
56                      260                      265                      270
57      Lys Ser Ser Thr Asp Cys Leu Ile Gln Ala Val Gln Gly Glu Gly
58                      275                      280                      285
59      Phe Met Ser Leu Tyr Lys Gly Phe Leu Pro Ser Trp Leu Arg Met
60                      290                      295                      300
61      Thr Pro Trp Ser Met Val Phe Trp Leu Thr Tyr Glu Lys Ile Arg
62                      305                      310                      315
63      Glu Met Ser Gly Val Ser Pro Phe
64                      320

```

66 <210> SEQ ID NO: 2

67 <211> LENGTH: 1039

68 <212> TYPE: DNA

69 <213> ORGANISM: Homo sapiens

70 <400> SEQUENCE: 2

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71      ccgagctcgg atcccgttat cgtcttgccg tactgctgaa tgtccgtccc 50
72      ggaggaggag gagaggcttt tgccgctgac ccagagatgg ccccgagcga 100
73      gcaaattcct actgtccggc tgccgcgcta ccgtggccga gctagcaacc 150
74      tttcccctgg atctcacaaa aactcgactc caaatgcaag gagaagcagc 200
75      tcttgctcgg ttgggagacg gtgcaagaga atctgcccc tataggggaa 250
76      tgggtgcgcac agccctaggg atcattgaag aggaaggctt tctaaagctt 300
77      tggcaaggag tgacacccgc catttacaga cacgtagtgt attctggagg 350
78      tcgaatggtc acatatgaac atctccgaga ggttgtgttt ggcaaaagtg 400
79      aagatgagca ttatcccctt tggaaatcag tcattggagg gatgatggct 450
80      ggtgttattg gccagttttt agccaatcca actgacctag tgaaggttca 500
81      gatgcaaatg gaaggaaaaa ggaaactgga aggaaaacca ttgcgatttc 550
82      gtggtgtaca tcatgcattt gcaaaaatct tagctgaagg aggaatacga 600
83      gggctttggg caggctgggt acccaatata caaagagcag cactggtgaa 650
84      tatgggagat ttaaccactt atgatacagt gaaacactac ttggtattga 700
85      atacaccact tgaggacaat atcatgactc acggtttatc aagtttatgt 750
86      tctggactgg tagcttctat tctgggaaca ccagccgatg tcatcaaaag 800
87      cagaataatg aatcaaccac gagataaaca aggaagggga cttttgtata 850
88      aatcatcgac tgactgcttg attcaggctg ttcaaggtga aggattcatg 900
89      agtctatata aaggcttttt accatcttgg ctgagaatga ccccttggtc 950
90      aatggtgttc tggcttactt atgaaaaaat cagagagatg agtggagtca 1000
91      gtccatttta agaattctgc agatatccat cacactggc 1039

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93 <210> SEQ ID NO: 3

94 <211> LENGTH: 31

95 <212> TYPE: DNA

RAW SEQUENCE LISTING

DATE: 04/07/2003

PATENT APPLICATION: US/09/397,342C

TIME: 19:19:23

Input Set : N:\AMC\I397342c.raw

Output Set: N:\CRF4\04072003\I397342C.raw

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96 <213> ORGANISM: Artificial Sequence
97 <220> FEATURE:
98 <223> OTHER INFORMATION: Sequence is synthesized
99 <400> SEQUENCE: 3
100      cgcggtatccc gttatcgtct tgcgctactg c 31
102 <210> SEQ ID NO: 4
103 <211> LENGTH: 34
104 <212> TYPE: DNA
105 <213> ORGANISM: Artificial Sequence
106 <220> FEATURE:
107 <223> OTHER INFORMATION: reverse primer
108 <400> SEQUENCE: 4
109      gcggaattct taaaatggac tgactccact catc 34
111 <210> SEQ ID NO: 5
112 <211> LENGTH: 1248
113 <212> TYPE: DNA
114 <213> ORGANISM: Artificial Sequence
115 <220> FEATURE:
116 <223> OTHER INFORMATION: Sequence is synthesized
117 <220> FEATURE:
118 <221> NAME/KEY: unsure
119 <222> LOCATION: 1231
120 <223> OTHER INFORMATION: unknown base
121 <400> SEQUENCE: 5
122      cgttatcgtc ttgcgctact gctgaatgtc cgtcccggag gaggaggaga 50
123      ggcttttgcc gctgaccag agatggcccc gagcgagcaa attcctactg 100
124      tccggctgcg cggctaccgt ggccgagcta gcaacctttc ccctggatct 150
125      cacaataact cgactccaaa tgcaaggaga agcagctctt gctcggttgg 200
126      gagacggtgc aagagaatct gccccctata ggggaatggg gcgcacagcc 250
127      ctagggatca ttgaagagga aggctttcta aagctttggc aaggagtgc 300
128      acccgccatt tacagacacg tagttatttc tggaggtcga atggtcacat 350
129      atgaacatct ccgagaggtt gtgtttggca aaagtgaaga tgagcattat 400
130      cccctttgga aatcagtcac tggagggatg atggctggtg ttattggcca 450
131      gtttttagcc aatccaactg acctagtga ggttcagatg caaatggaag 500
132      gaaaaaggaa actggaagga aaaccattgc gatttcgtgg tgtacatcat 550
133      gcatttgcaa aaatcttagc tgaaggagga atacgaaggc tttgggcagg 600
134      ctgggtaccc aatatacaaa gagcagcact ggtgaatatg ggagatttaa 650
135      ccacttatga tacagtgaac cactacttgg tattgaatac accacttgag 700
136      gacaatatca tgactcacgg tttatcaagt ttatgttctg gactggtagc 750
137      ttctattctg ggaacaccag ccgatgtcat caaaagcaga ataataaatc 800
138      aaccacgaga taaacaagga aggggacttt tgtataaatc atcgactgac 850
139      tgcttgattc aggtgttca aggtgaagga ttcattgagtc tatataaagg 900
140      ctttttacca tcttggtcga gaatgacccc ttggtcaatg gtgttctggc 950
141      ttacttatga aaaaatcaga gagatgagtg gactcagtc attttaaacc 1000
142      cctaaagatg caacccttaa agatcacagt ttcagtatta ttgaaatatg 1050
143      ggcattctga acacataccc cctattattt ctacctcttt aggaagacac 1100
144      ctattccaca gagactgatt tatagggggc agcactttat tttttctgg 1150
145      aaaccaagt tctctttgac tcctcttttt gtccaaaagt gatctggtcg 1200
W--> 146      gatctcacia ggccatccaa tgagaccccc nacagcattt tctaaaga 1248

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RAW SEQUENCE LISTING

DATE: 04/07/2003

PATENT APPLICATION: US/09/397,342C

TIME: 19:19:23

Input Set : N:\AMC\I397342c.raw

Output Set: N:\CRF4\04072003\I397342C.raw

148 <210> SEQ ID NO: 6
149 <211> LENGTH: 58
150 <212> TYPE: DNA
151 <213> ORGANISM: Artificial Sequence
152 <220> FEATURE:
153 <223> OTHER INFORMATION: Sequence is synthesized
154 <400> SEQUENCE: 6
155 cgcggatccg aaatggacta caaggacgac gatgacaagt ccgtcccgga 50
156 ggaggagg 58
158 <210> SEQ ID NO: 7
159 <211> LENGTH: 35
160 <212> TYPE: DNA
161 <213> ORGANISM: Artificial Sequence
162 <220> FEATURE:
163 <223> OTHER INFORMATION: Sequence is synthesized
164 <400> SEQUENCE: 7
165 gcgaagcttg ccatggttg actgaagcct tcaga 35
167 <210> SEQ ID NO: 8
168 <211> LENGTH: 33
169 <212> TYPE: DNA
170 <213> ORGANISM: Artificial Sequence
171 <220> FEATURE:
172 <223> OTHER INFORMATION: reverse primer
173 <400> SEQUENCE: 8
174 cgcgaattct caaaacggtg attcccgtaa cat 33
176 <210> SEQ ID NO: 9
177 <211> LENGTH: 61
178 <212> TYPE: DNA
179 <213> ORGANISM: Artificial Sequence
180 <220> FEATURE:
181 <223> OTHER INFORMATION: Sequence is synthesized
182 <400> SEQUENCE: 9
183 gcgaagcttg ccatggacta caaggacgac gatgacaagg ttggactgaa 50
184 gccttcagac g 61
186 <210> SEQ ID NO: 10
187 <211> LENGTH: 19
188 <212> TYPE: DNA
189 <213> ORGANISM: Artificial Sequence
190 <220> FEATURE:
191 <223> OTHER INFORMATION: Sequence is synthesized
192 <400> SEQUENCE: 10
193 aatgcctatc gccgaggag 19
195 <210> SEQ ID NO: 11
196 <211> LENGTH: 20
197 <212> TYPE: DNA
198 <213> ORGANISM: Artificial Sequence
199 <220> FEATURE:
200 <223> OTHER INFORMATION: reverse primer
201 <400> SEQUENCE: 11

RAW SEQUENCE LISTING

DATE: 04/07/2003

PATENT APPLICATION: US/09/397,342C

TIME: 19:19:23

Input Set : N:\AMC\I397342c.raw

Output Set: N:\CRF4\04072003\I397342C.raw

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202      gtaggaactt gctcgtccgg 20
204 <210> SEQ ID NO: 12
205 <211> LENGTH: 22
206 <212> TYPE: DNA
207 <213> ORGANISM: Artificial Sequence
208 <220> FEATURE:
209 <223> OTHER INFORMATION: Sequence is synthesized
210 <400> SEQUENCE: 12
211      tgctcgcgct cacgcagaga tg 22
213 <210> SEQ ID NO: 13
214 <211> LENGTH: 24
215 <212> TYPE: DNA
216 <213> ORGANISM: Artificial Sequence
217 <220> FEATURE:
218 <223> OTHER INFORMATION: Sequence is synthesized
219 <400> SEQUENCE: 13
220      gaaatcgtgc gtgacatcaa agag 24
222 <210> SEQ ID NO: 14
223 <211> LENGTH: 23
224 <212> TYPE: DNA
225 <213> ORGANISM: Artificial Sequence
226 <220> FEATURE:
227 <223> OTHER INFORMATION: reverse primer
228 <400> SEQUENCE: 14
229      ctccttctgc atcctgtcag caa 23
231 <210> SEQ ID NO: 15
232 <211> LENGTH: 22
233 <212> TYPE: DNA
234 <213> ORGANISM: Artificial Sequence
235 <220> FEATURE:
236 <223> OTHER INFORMATION: Sequence is synthesized
237 <400> SEQUENCE: 15
238      cggttccgat gccctgaggc tc 22
240 <210> SEQ ID NO: 16
241 <211> LENGTH: 307
242 <212> TYPE: PRT
243 <213> ORGANISM: Homo sapiens
244 <400> SEQUENCE: 16
245      Met Gly Gly Leu Thr Ala Ser Asp Val His Pro Thr Leu Gly Val
246      1          5          10          15
247      Gln Leu Phe Ser Ala Pro Ile Ala Ala Cys Leu Ala Asp Val Ile
248      20          25          30
249      Thr Phe Pro Leu Asp Thr Ala Lys Val Arg Leu Gln Val Gln Gly
250      35          40          45
251      Glu Cys Pro Thr Ser Ser Val Ile Arg Tyr Lys Gly Val Leu Gly
252      50          55          60
253      Thr Ile Thr Ala Val Val Lys Thr Glu Gly Arg Met Lys Leu Tyr
254      65          70          75
255      Ser Gly Leu Pro Ala Gly Leu Gln Arg Gln Ile Ser Ser Ala Ser

```

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 04/07/2003
PATENT APPLICATION: US/09/397,342C TIME: 19:19:24

Input Set : N:\AMC\I397342c.raw
Output Set: N:\CRF4\04072003\I397342C.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:5; N Pos. 1231



1600

RAW SEQUENCE LISTING

DATE: 04/07/2003

PATENT APPLICATION: US/09/397,342C

TIME: 14:36:34

Input Set : A:\P1626R1.txt

Output Set: N:\CRF4\04072003\I397342C.raw

W--> 1 Patin Docket Preview

7 <110> APPLICANT: Adams, Sean

8 Pan, James

9 Zhong, Alan

11 <120> TITLE OF INVENTION: UCP4

13 <130> FILE REFERENCE: P1626R1

15 <140> CURRENT APPLICATION NUMBER: US 09/397,342C

16 <141> CURRENT FILING DATE: 1999-09-15

18 <150> PRIOR APPLICATION NUMBER: US 60/101,279

19 <151> PRIOR FILING DATE: 1998-09-22

21 <150> PRIOR APPLICATION NUMBER: US 60/114,223

22 <151> PRIOR FILING DATE: 1998-12-30

24 <150> PRIOR APPLICATION NUMBER: US 60/129,674

25 <151> PRIOR FILING DATE: 1999-04-16

27 <160> NUMBER OF SEQ ID NOS: 18

29 <210> SEQ ID NO: 1

30 <211> LENGTH: 323

31 <212> TYPE: PRT

32 <213> ORGANISM: Homo sapiens

34 <400> SEQUENCE: 1

35 Met Ser Val Pro Glu Glu Glu Glu Arg Leu Leu Pro Leu Thr Gln

36 1 5 10 15

38 Arg Trp Pro Arg Ala Ser Lys Phe Leu Leu Ser Gly Cys Ala Ala

39 20 25 30

41 Thr Val Ala Glu Leu Ala Thr Phe Pro Leu Asp Leu Thr Lys Thr

42 35 40 45

44 Arg Leu Gln Met Gln Gly Glu Ala Ala Leu Ala Arg Leu Gly Asp

45 50 55 60

47 Gly Ala Arg Glu Ser Ala Pro Tyr Arg Gly Met Val Arg Thr Ala

48 65 70 75

50 Leu Gly Ile Ile Glu Glu Glu Gly Phe Leu Lys Leu Trp Gln Gly

51 80 85 90

53 Val Thr Pro Ala Ile Tyr Arg His Val Val Tyr Ser Gly Gly Arg

54 95 100 105

56 Met Val Thr Tyr Glu His Leu Arg Glu Val Val Phe Gly Lys Ser

57 110 115 120

59 Glu Asp Glu His Tyr Pro Leu Trp Lys Ser Val Ile Gly Gly Met

60 125 130 135

62 Met Ala Gly Val Ile Gly Gln Phe Leu Ala Asn Pro Thr Asp Leu

63 140 145 150

65 Val Lys Val Gln Met Gln Met Glu Gly Lys Arg Lys Leu Glu Gly

66 155 160 165

68 Lys Pro Leu Arg Phe Arg Gly Val His His Ala Phe Ala Lys Ile

**Does Not Comply
Corrected Diskette Needed**

RAW SEQUENCE LISTING

DATE: 04/07/2003

PATENT APPLICATION: US/09/397,342C

TIME: 14:36:34

Input Set : A:\P1626R1.txt

Output Set: N:\CRF4\04072003\I397342C.raw

69		170		175		180
71	Leu Ala Glu Gly Gly Ile Arg Gly Leu Trp Ala Gly Trp Val Pro					
72		185		190		195
74	Asn Ile Gln Arg Ala Ala Leu Val Asn Met Gly Asp Leu Thr Thr					
75		200		205		210
77	Tyr Asp Thr Val Lys His Tyr Leu Val Leu Asn Thr Pro Leu Glu					
78		215		220		225
80	Asp Asn Ile Met Thr His Gly Leu Ser Ser Leu Cys Ser Gly Leu					
81		230		235		240
83	Val Ala Ser Ile Leu Gly Thr Pro Ala Asp Val Ile Lys Ser Arg					
84		245		250		255
86	Ile Met Asn Gln Pro Arg Asp Lys Gln Gly Arg Gly Leu Leu Tyr					
87		260		265		270
89	Lys Ser Ser Thr Asp Cys Leu Ile Gln Ala Val Gln Gly Glu Gly					
90		275		280		285
92	Phe Met Ser Leu Tyr Lys Gly Phe Leu Pro Ser Trp Leu Arg Met					
93		290		295		300
95	Thr Pro Trp Ser Met Val Phe Trp Leu Thr Tyr Glu Lys Ile Arg					
96		305		310		315
98	Glu Met Ser Gly Val Ser Pro Phe					
99		320				

101 <210> SEQ ID NO: 2

102 <211> LENGTH: 1039

103 <212> TYPE: DNA

104 <213> ORGANISM: Homo sapiens

106 <400> SEQUENCE: 2

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107 ccgagctcgg atcccgttat cgtcttgcgc tactgtctgaa tgtccgtccc 50
109 ggaggaggag gagaggcttt tgccgctgac ccagagatgg ccccgagcga 100
111 gcaaatctct actgtccggc tgcgcggcta ccgtggccga gctagcaacc 150
113 tttcccctgg atctcacaaa aactcgactc caaatgcaag gagaagcagc 200
115 tcttgctcgg ttgggagacg gtgcaagaga atctgcccc tataggggaa 250
117 tgggtgcgcac agccctaggg atcattgaag aggaaggctt tctaaagctt 300
119 tggcaaggag tgacacccgc catctacaga cacgtagtgt attctggagg 350
121 tcgaatgggt acatatgaac atctccgaga ggttgtgttt ggcaaaagt 400
123 aagatgagca ttatcccctt tggaaatcag tcattggagg gatgatggct 450
125 ggtgttattg gccagttttt agccaatcca actgacctag tgaaggttca 500
127 gatgcaaatg gaaggaaaaa ggaaactgga aggaaaaacca ttgcgatttc 550
129 gtgggtgtaca tcatgcattt gcaaaaatct tagctgaagg aggaatacga 600
131 gggctttggg caggctgggt acccaatata caaagagcag cactggtgaa 650
133 tatgggagat ttaaccactt atgatacagt gaaacactac ttggtattga 700
135 atacaccact tgaggacaat atcatgactc acggtttatc aagtttatgt 750
137 tctggactgg tagcttctat tctgggaaca ccagccgatg tcatcaaaaag 800
139 cagaataatg aatcaaccac gagataaaca aggaagggga cttttgtata 850
141 aatcatcgac tgactgttg attcaggctg ttcaagggtg aggattcatg 900
143 agtctatata aaggcttttt accatcttgg ctgagaatga ccccttggtc 950
145 aatggtgttc tggcttactt atgaaaaaat cagagagatg agtggagtca 1000
147 gtccatttta agaattctgc agatatccat cacactggc 1039

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149 <210> SEQ ID NO: 3

150 <211> LENGTH: 31

RAW SEQUENCE LISTING

DATE: 04/07/2003

PATENT APPLICATION: US/09/397,342C

TIME: 14:36:34

Input Set : A:\P1626R1.txt

Output Set: N:\CRF4\04072003\I397342C.raw

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151 <212> TYPE: DNA
152 <213> ORGANISM: Artificial Sequence
154 <220> FEATURE:
155 <223> OTHER INFORMATION: Sequence is synthesized
157 <400> SEQUENCE: 3
158  cgcggtatccc gttatcgtct tgcgctactg c 31
160 <210> SEQ ID NO: 4
161 <211> LENGTH: 34
162 <212> TYPE: DNA
163 <213> ORGANISM: Artificial Sequence
165 <220> FEATURE:
166 <223> OTHER INFORMATION: reverse primer
168 <400> SEQUENCE: 4
169  gcggaattct taaaatggac tgactccact catc 34
171 <210> SEQ ID NO: 5
172 <211> LENGTH: 1248
173 <212> TYPE: DNA
174 <213> ORGANISM: Artificial Sequence
176 <220> FEATURE:
177 <223> OTHER INFORMATION: Sequence is synthesized
179 <220> FEATURE:
180 <221> NAME/KEY: unsure
181 <222> LOCATION: 1231
182 <223> OTHER INFORMATION: unknown base
184 <400> SEQUENCE: 5
185  cgttatcgtc ttgcgctact gctgaatgtc cgtcccggag gaggaggaga 50
187  ggcttttgcc gctgaccag agatggcccc gagcgagcaa attcctactg 100
189  tccggctgcg cggctaccgt ggccgagcta gcaacccttc ccctggatct 150
191  cacaaaaact cgactccaaa tgcaaggaga agcagctctt gctcggttgg 200
193  gagacggtgc aagagaatct gccccctata ggggaatggt gcgcacagcc 250
195  ctagggatca ttgaagagga aggctttcta aagctttggc aaggagtgc 300
197  acccgccatt tacagacacg tagttatttc tggaggtcga atggtcacat 350
199  atgaacatct ccgagaggtt gtgtttggca aaagtgaaga tgagcattat 400
201  cccctttgga aatcagtcac tggagggatg atggctgggt ttattggcca 450
203  gtttttagcc aatccaactg acctagttaa gggttcagatg caaatggaag 500
205  gaaaaaggaa actggaagga aaaccattgc gatttcgtgg tgtacatcat 550
207  gcatttgcaa aaatcttagc tgaaggagga atacgaaggc tttgggcagg 600
209  ctgggtaccc aatatacaaa gagcagcact ggtgaatatg ggagatttaa 650
211  ccacttatga tacagtgaac cactacttgg tattgaatac accacttgag 700
213  gacaatatca tgactcacgg tttatcaagt ttatgttctg gactggtagc 750
215  ttctattctg ggaacaccag ccgatgtcat caaaagcaga ataataaatc 800
217  aaccacgaga taaacaagga aggggacttt tgataaatc atcgactgac 850
219  tgcttgattc aggtgttca aggtgaagga ttcattgagc tatataaagg 900
221  ctttttacc aattgtgctga gaatgacccc ttggtcaatg gtgttctggc 950
223  ttacttatga aaaaatcaga gagatgagtg gagtcagtcc atttttaaacc 1000
225  cctaaagatg caacccttaa agatacagtg ttcagtatta ttgaaatatg 1050
227  ggcattctga acacataccc cctattatct ctacctctt aggaagacac 1100
229  ctattccaca gagactgatt tatagggggc agcactttat ttttttctgg 1150
231  aaaccaagt tctctttgac tcctcttttt gtccaaaagt gatctggtcg 1200

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RAW SEQUENCE LISTING

DATE: 04/07/2003

PATENT APPLICATION: US/09/397,342C

TIME: 14:36:34

Input Set : A:\P1626R1.txt

Output Set: N:\CRF4\04072003\I397342C.raw

W--> 233 gatctcacaa ggccatccaa tgagaccccg nacagcattt tctaaaga 1248
235 <210> SEQ ID NO: 6
236 <211> LENGTH: 58
237 <212> TYPE: DNA
238 <213> ORGANISM: Artificial Sequence
240 <220> FEATURE:
241 <223> OTHER INFORMATION: Sequence is synthesized
243 <400> SEQUENCE: 6
244 cgcgatccg aaatggacta caaggacgac gatgacaagt ccgtcccga 50
246 ggaggagg 58
248 <210> SEQ ID NO: 7
249 <211> LENGTH: 35
250 <212> TYPE: DNA
251 <213> ORGANISM: Artificial Sequence
253 <220> FEATURE:
254 <223> OTHER INFORMATION: Sequence is synthesized
256 <400> SEQUENCE: 7
257 gcgaagcttg ccatgggttg actgaagcct tcaga 35
259 <210> SEQ ID NO: 8
260 <211> LENGTH: 33
261 <212> TYPE: DNA
262 <213> ORGANISM: Artificial Sequence
264 <220> FEATURE:
265 <223> OTHER INFORMATION: reverse primer
267 <400> SEQUENCE: 8
268 cgcaattct caaacggtg attcccgtaa cat 33
270 <210> SEQ ID NO: 9
271 <211> LENGTH: 61
272 <212> TYPE: DNA
273 <213> ORGANISM: Artificial Sequence
275 <220> FEATURE:
276 <223> OTHER INFORMATION: Sequence is synthesized
278 <400> SEQUENCE: 9
279 gcgaagcttg ccatggacta caaggacgac gatgacaagg ttggactgaa 50
281 gccttcagac g 61
283 <210> SEQ ID NO: 10
284 <211> LENGTH: 19
285 <212> TYPE: DNA
286 <213> ORGANISM: Artificial Sequence
288 <220> FEATURE:
289 <223> OTHER INFORMATION: Sequence is synthesized
291 <400> SEQUENCE: 10
292 aatgcctatc gccgaggag 19
294 <210> SEQ ID NO: 11
295 <211> LENGTH: 20
296 <212> TYPE: DNA
297 <213> ORGANISM: Artificial Sequence
299 <220> FEATURE:
300 <223> OTHER INFORMATION: reverse primer

RAW SEQUENCE LISTING

DATE: 04/07/2003

PATENT APPLICATION: US/09/397,342C

TIME: 14:36:34

Input Set : A:\P1626R1.txt

Output Set: N:\CRF4\04072003\I397342C.raw

```

302 <400> SEQUENCE: 11
303 gtaggaactt gctcgtccgg 20
305 <210> SEQ ID NO: 12
306 <211> LENGTH: 22
307 <212> TYPE: DNA
308 <213> ORGANISM: Artificial Sequence
310 <220> FEATURE:
311 <223> OTHER INFORMATION: Sequence is synthesized
313 <400> SEQUENCE: 12
314 tgctcgcgct cacgcagaga tg 22
316 <210> SEQ ID NO: 13
317 <211> LENGTH: 24
318 <212> TYPE: DNA
319 <213> ORGANISM: Artificial Sequence
321 <220> FEATURE:
322 <223> OTHER INFORMATION: Sequence is synthesized
324 <400> SEQUENCE: 13
325 gaaatcgtgc gtgacatcaa agag 24
327 <210> SEQ ID NO: 14
328 <211> LENGTH: 23
329 <212> TYPE: DNA
330 <213> ORGANISM: Artificial Sequence
332 <220> FEATURE:
333 <223> OTHER INFORMATION: reverse primer
335 <400> SEQUENCE: 14
336 ctcttctgc atcctgtcag caa 23
338 <210> SEQ ID NO: 15
339 <211> LENGTH: 22
340 <212> TYPE: DNA
341 <213> ORGANISM: Artificial Sequence
343 <220> FEATURE:
344 <223> OTHER INFORMATION: Sequence is synthesized
346 <400> SEQUENCE: 15
347 cggttccgat gccctgaggc tc 22
349 <210> SEQ ID NO: 16
350 <211> LENGTH: 307
351 <212> TYPE: PRT
352 <213> ORGANISM: Homo sapiens.
354 <400> SEQUENCE: 16
355 Met Gly Gly Leu Thr Ala Ser Asp Val His Pro Thr Leu Gly Val
356 1 5 10 15
358 Gln Leu Phe Ser Ala Pro Ile Ala Ala Cys Leu Ala Asp Val Ile
359 20 25 30
361 Thr Phe Pro Leu Asp Thr Ala Lys Val Arg Leu Gln Val Gln Gly
362 35 40 45
364 Glu Cys Pro Thr Ser Ser Val Ile Arg Tyr Lys Gly Val Leu Gly
365 50 55 60
367 Thr Ile Thr Ala Val Val Lys Thr Glu Gly Arg Met Lys Leu Tyr
368 65 70 75

```

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 04/07/2003
PATENT APPLICATION: US/09/397,342C TIME: 14:36:35

Input Set : A:\P1626R1.txt
Output Set: N:\CRF4\04072003\I397342C.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:5; N Pos. 1231

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/397,342C

DATE: 04/07/2003

TIME: 14:36:35

Input Set : A:\P1626R1.txt

Output Set: N:\CRF4\04072003\I397342C.raw

L:1 M:259 W: Allowed number of lines exceeded, (1) GENERAL INFORMATION:
L:233 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:1200